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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,707	06/24/2003	Kimio Nagasaka	116035	7535
25944	7590	04/12/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			KIANNI, KAVEH C	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/601,707

Applicant(s)

NAGASAKA ET AL.

Examiner

Kianni C. Kaveh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 12-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-11 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

- Applicant's election with traverse of claims 1-11 in response/amendment submitted on 1/13/05 is acknowledged. The traversal is on the ground(s) that search and the examination of the entire application can be made without serious burden. This is not found persuasive because the process of making a transceiver cited in claims 1-11 can be made with other optical components such as an optical connector for mounting the optical plug and/or transceiver rather than through an optical socket as stated in process invention group II and/or III. Thus, the search requires for group I, claims 1-11, does not require for Group II and/or III and thus the requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 4 and 6 recites the limitation 'the optical elements' in 1<sup>st</sup> –7th lines. There is insufficient antecedent basis for this limitation in the claim. Correction is required.

### ***Allowable Subject Matter***

Claim 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if they any of the claims no longer rejected under 34USC 112, and be

rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 4, as stated above, once corrected would be allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious with one of the lenses being disposed on the other surface of the substrate in correspondence with the location of the optical element and another lens being disposed near an end of the optical socket so as to oppose the optical element in combination with the rest of the limitations of the base claim.

Claim 5 is allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious the light emitter and the light receiver being disposed on one surface of the substrate, and the first and second light-condensing devices and the optical socket being disposed on the other surface of the substrate, with the first and second light-condensing devices being disposed on the other surface of the substrate in correspondence with the locations of the light emitter and the light receiver, respectively, in combination with the rest of the limitations of the base claim.

Claim 6, as stated above, once corrected would be allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious the first and second lenses being disposed so that one of the first and second lenses is disposed on the other surface of the substrate in correspondence with the location of one of the optical elements and the other of the first and second lenses is disposed near an end of

the optical socket so as to oppose the one of the optical elements in combination with the rest of the limitations of the base claim.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchter (US 6536957).

Regarding claims 1 and 7, Buchter teaches an optical transceiver for use with an optical plug disposed at one end of an optical fiber (shown in at least fig. 1 and/or 2, also abstract), comprising: an optical socket 31 to mount the optical plug 15; a lens 127; an optical element (143 and/or 113) to perform at least one of emitting light in accordance with a supplied electrical signal, and generating an electrical signal in accordance with a received light signal (see items 143/113); and a light-transmissive

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substrate (see substrate 122 and/or 124) to support the optical socket 31, the lens, and the optical element so that the optical fiber , the lens, and the optical element are aligned on an optical axis of the optical transceiver (shown in at least fig. 2, 3 and 7, wherein the optical element, such as 143/113, that the optical fiber 13, the lens 127, are aligned on an optical axis, any direction such as x and/or y axis of the optical transceiver).

However, Buchter does not explicitly teach wherein the above lens is a 'light-condensing device' and that the substrate being a glass substrate . It would have been obvious to a person of ordinary skill in the art when the invention was made to produce the above transparent substrate a glass which is obviously transparent since such modification/choice does not have bearing in the function of invention and it is conventional and also it is well-known to those of ordinary skill in the art when the invention was made that a lens used as a focusing device is known as a light condenser, as admitted by the applicant, since such a device would provide communication links in an integrated optical transceiver system (see col. 1, 1<sup>st</sup> -3<sup>rd</sup> parag.).

- The statements advanced in claims , above, as to the applicability and disclosure of Buchter are incorporated herein as follows.

Regarding claim 2, Buchter teaches an optical transceiver for use with an optical plug that holds one end of a first optical fiber and one end of a second optical fiber (shown in at least fig. 1 and/or 2, also abstract), comprising:

an optical socket 31 to mount the optical plug 15; first and second optical lenses 127; a light emitter 143 to emit light in accordance with a supplied electrical signal; a light receiver 113 to generate an electrical signal in accordance with a received light signal; and a light-transmissive substrate (see substrate 122 and/or 124) to support the optical socket 31, the first and second optical lenses 127, the light emitter, and the light receiver (shown in at least fig. 2, 3 and 7 item substrate supports all socket 31, the lenses 127, the light emitter, and the light receive);

so that the first optical fiber 13a, the first lens, and the light emitter are aligned on a optical axis of the optical transceiver and so that the second optical fiber 13b, the second lens, and the light receiver are aligned on optical axis of the optical transceiver (shown in at least figures 2-7, items first and second light emitting sources, such as array 143, light receivers 113a,b,...n, lenses, such as array 161 are aligned on optical axis of the transceiver).

However, Buchter does not explicitly teach wherein the above alignment is such that the first optical fiber, the first lens, and the light emitter are aligned on a first optical axis of the optical transceiver and so that the second optical fiber, the second lens, and the light receiver are aligned on optical axis of the optical transceiver. It is obvious/well-known to those of ordinary skill in the art when the invention was made that as shown in at least figures 2-7, items first and second light emitting sources, such as array 143,

light receivers 113a,b,...n, lenses, such as array 161 are aligned two dimensionally in X and Y optical axis of the transceiver, in which the optical axis need not to be necessarily perpendicular to each other, and thus the above optical elements are aligned in the first and second optical axis of the transceiver , since such optical configuration would provide communication links in an integrated optical transceiver system (see col. 1, 1<sup>st</sup> -3<sup>rd</sup> parag.).

Regarding claim 3 and 9-11, Butcher further teaches the optical element being disposed on one surface of the substrate, and the lens and the optical socket being disposed on the other surface of the substrate in correspondence with the location of the optical element (see at least fig. 2 and 7, item optical element such as 113 is located in one side of the substrate and the lens and the optical socket are on the other side of the substrate); the optical socket being joined to the substrate (see fig. 2, items 31 and 101); the lens being any one of a refractive lens a Fresnel lens, and a Selfoc lens (see fig. 7, item 165. Note also that it is matter of choice to choose any of the above lenses), at least one of the optical element and the light emitter being a surface emitting laser (see surface mounted emitters such as 135 and or receivers 113b).

Claims 1 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pommer et al. (US 20030201462).

Regarding claims 1, 7 and 9-11, Pommer teaches an optical for use with an optical plug disposed at one end of an optical fiber (shown in at least fig. 17, see

abstract wherein a system of transmitting and receiving light is a transceiver), comprising: an optical socket to mount the optical plug (shown in fig. 17, item socket holding the substrate board and see at least parag. 0274); a lens (see parag. 0260); an optical element to perform at least one of emitting light in accordance with a supplied electrical signal, and generating an electrical signal in accordance with a received light signal (see at least parag. 0084); and a light-transmissive/glass substrate (see parag. 0280) to support the optical socket, the lens, and the optical element so that the optical fiber, the lens, and the optical element are aligned on an optical axis of the optical transceiver (shown in at least fig. 17 in which all optical elements are in an optical axis such as x or y axis).

However, Pommer does not explicitly teach wherein the above lens is a 'light-condensing device'. It is conventional and also it is well-known to those of ordinary skill in the art when the invention was made that a lens used as a focusing device is known as a light condenser, as admitted by the applicant, since such a device would provide communication links in an integrated optical transceiver system (see col. 1, 1<sup>st</sup>-3<sup>rd</sup> parag.).

Regarding claim 8, Pommer further teaches wherein the substrate having a plurality of guide holes, and the optical socket having a plurality of guide pins that are disposed in the respective guide holes in combination with the rest of the limitations of the base claim (see at least parag. 0313 and 0316).

***Citation of Relevant Prior Art***

Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does.

These references are:

Li 20030048998

Zhou 6588949

Colvin, Jr. 6330464

Kato 5424573

Kambo 4876446

Frederiksen 4188708

These references are cited herein to show the relevance of the apparatus/methods taught within these references as prior art.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Cyrus Kianni whose telephone number is (571) 272-2417.

The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 6:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font, can be reached at (571) 272-2415.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 872-9306 (for formal communications intended for entry)

**or:**

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Hand delivered responses should be brought to Crystal Plaza 4, 2021 South Clark Place,  
Arlington, VA., Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to  
the Group Receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'K. Kianni', with a long horizontal flourish extending to the right.

K. Cyrus Kianni  
Patent Examiner  
Group Art Unit 2883

March 28, 2005